John Bull's "Art of Canon" and Plainsong-Based Counterpoint in the Late Renaissance

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The importance of plainsong-based instruction in music is increasingly recognized in late sixteenth- and early seventeenth-century music pedagogy. From the earliest stages of their training, students during this period encountered pre-existing melodies, known as cantus firmi or plainsongs,[1] which served as vehicles to demonstrate principles of voice leading and rhythmic relations, including basic consonance and dissonance treatment, cadence formation, rhythmic ratios, and motivic manipulation through ostinato, imitation and invertible counterpoint. Our knowledge of this period's pedagogy is largely informed by contemporary instruction books and treatises but also through surviving manuscript sources that appear to transmit the teachings of individual figures. In this latter respect, we are especially indebted to writings connected with the pedagogical activities of Vicente Lusitano (Gialdroni 1989), Giovanni Maria Nanino (Ferand 1956) and Jan Pieterszoon Sweelinck (Walker 1996). The recent rediscovery of a manuscript by Lusitano with highly detailed instructions has prompted a reappraisal of contemporary expectations of plainsong-based improvisatory skills for professional musicians across diverse professional contexts (Canguilhem 2011). Such sources indicate the central role that plainsongs played in musical life at the time, and it is not surprising that this is reflected in many aspects of compositional output. These included not only instrumental settings in which the melodic profile of the plainsong is projected clearly (Caldwell 1965), but also more general application in free compositions of voice-leading and other structural patterns discussed by the theorists in their plainsong-based instructional texts (Froebe 2007). Another indication of the importance of plainsongs is in the numerous collections of canons and other kinds of counterpoint written over plainsongs. These compositions demonstrate considerable technical accomplishment and may have conferred status on their composers in the eyes of their contemporaries. It is with this body of work that the present study will be mostly concerned.

"Bach's monument to fugal polyphony is his 'Art of Fugue'; it is not unjust to apply a similar title to Bull's transcendental studies in the 'Art of Canon'." This comparison between Bull's achievements in canonic writing and the ultimate authority of Bach's fugal craftsmanship was made by Thurston Dart

1 The term plainsong will be used throughout this paper.

(1921-1971) in an incomplete monograph on Bull. Although Dart occasionally mentioned his ongoing book-length study of Bull (for instance in a short article for *The Musical Times* in 1963), it remained unpublished at his death, and its contents and whereabouts were largely unknown during the subsequent decades. Dart devoted a chapter to Bull's several hundred canons over the *Miserere* plainsong, but this aspect of Bull's creativity has otherwise received little attention apart from some consideration of the remarkably high interest in advanced contrapuntal techniques, especially plainsong canons, among late sixteenth- and early seventeenth-century English musicians (Bevin ed. Collins 2007, Danner 1967). The results of their activity mainly survive in manuscript sources, but there is also a published collection of 40 plainsong canons by John Farmer (Bowling 1982). The often obsessive nature of these undertakings is reflected in the very large numbers of canons left by some composers: hundreds each by John Bull and Elway Bevin and over one thousand by their little-known contemporary, George Waterhouse (Collins 2007).

Although Dart had made known his intention to publish a book about Bull, I have found no further mention of his proposed monograph in any of the work-lists, bibliographies or dictionary entries connected with him. Given that Dart was one of the most eminent post-war British musicologists, this is somewhat surprising. In addition to publishing several articles on Bull, Dart was the driving force behind *Musica Britannica*, an editor for the Byrd and Purcell editions and an influential pedagogue and performer (Moroney and Oxenbury 1981). While there appears to have been no discussion anywhere of his unfinished work, some information about his estate is included in a web page created by one of his former students, Greg Holt.[2] Holt mentions that some of Dart's materials on Bull were passed to Susi Jeans in 1974. After her death in 1993, Holt and Davitt Moroney (another former student of Dart) arranged for the transfer of the papers to the Lady Susi Jeans Center for Organ Historiography at the University of Reading. However, after the closure of the Department of Music at that university in 2005, Christopher Kent was instrumental in securing the transfer of materials from the Jeans Center to the Library of the Royal College of Organists[3] These materials, known as the Susi Jeans Archive, are housed at the Records Department of Birmingham City University. None has yet been catalogued, but the collection contains a wealth of documents, correspondence and scholarly writings related to her work as a musicologist and her performance career as an organist.

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2 At <http://gregholt.co.uk/rtd.htm> This page lists the chapter headings in Dart's unpublished monograph on Bull and also describes miscellaneous items related to Dart's life and career now held in Holt's personal archive.

3 Personal email from Dr Kent on October 6th, 2009.

As no investigation of Bull's canonic writing has ever been published, Dart's work on Bull offers an important starting point for a full study of Bull's achievements in these works and their context within the domain of plainsong-based counterpoint in the late Renaissance. The present study undertakes only the first steps in this substantial project – it will assess Dart's contributions and then consider methodologies for analyzing Renaissance plainsong canons. Particular attention will be given to investigating how recent advances in the study of Renaissance *fuga* and modular counterpoint may provide useful tools for analyzing Bull's solutions to specific technical challenges.

Dart's Papers on Bull in the Susi Jeans Archive

Two folders in the Archive contain Dart's materials on Bull. These comprise his notes, correspondence and facsimile copies of documents related to Bull's life and works. In the following discussion I will refer to these as Folder 1 and Folder 2.[4] Other folders in the Archive contain miscellaneous correspondence and materials related to Jeans's research on Bull. The papers are available to readers on two conditions: "a) No biographical material in Dart's work be assumed to be now correct. b) Acknowledgement of Dart's name be made." Particularly relevant to the present study is a typescript in Folder 1 comprising several unnumbered chapters apparently intended for a monograph on Bull. No title page or other front matter is included amongst these materials, and some of the chapters exist in two or sometimes three versions also placed in these folders. Folder 1 also contains a spiral-bound notebook with a handwritten draft (possibly the earliest version). The first page is marked "I" perhaps as an indication of chapter or section number. This material corresponds to the first 67 pages of the typescript in Folder 1.

The sequence of chapters in the draft monograph is ordered around Bull's biography: his early life occupies the first ten pages (no section heading), followed by chapters entitled "Bull at Hereford," "At the Chapel Royal," "Gresham College," and "Bull's 'Art of Canon'." Two other draft chapters, likely intended for inclusion in the monograph, are located in Folder 2 and are entitled "The Paris Book" and "Royal Organist and Foreign Flight." Whereas the pagination of the Folder 1 typescript is continuous (pp. 1-96), pagination for chapters in the second folder (pp. 35-67) suggests that these materials reflect a different stage of preparation. In addition to these chapters, Folder 2 contains two almost identical versions of the chapter called "Bull's 'Art of Canon'."[5] These appear to represent an earlier stage of this chapter because their numerous handwritten corrections, present in both versions, are implemented in the chapter on canon in the Folder 1 typescript. Moreover, the Folder 2 drafts include

4 These two folders are the thirteenth and fourteenth folders in the Archive.

5 One version is missing two pages that are found in the other version.

additional material relating to Bull's biography in the first decade of the seventeenth century. It is hardly surprising that Dart may have removed this unrelated content from the presumably later Folder 1 chapter on Bull's canons. Another detail is that the Folder 2 chapters are in single-spaced type, whereas all of the Folder 1 material is double-spaced, perhaps further reflecting the more advanced state of preparation of the material in Folder 1. However, the Folder 1 typescript contains numerous marginal annotations and in-text alterations by Dart himself: corrections to grammar and punctuation along with gaps where references or quotations would later have been inserted, and also many comments by Dart reminding himself to check details. All page references in the present study are to the Folder 1 typescript.

As my work is concerned with Bull's accomplishments as a contrapuntist and Dart's views in this regard, I am not pursuing biographical questions considered by Dart, but focusing on his chapter devoted to Bull's canons. Comprising the last twenty-two pages of the typescript in Folder 1, this chapter begins with a short history of canon, mainly a listing of composers associated with this technique from Ockeghem to Webern. Dart noted that the composition of canons flourished in England between 1580 and 1640, and he considered this a high point in the cultivation of this technique. He judged Bull to be "undoubtedly the most outstanding" of the English canonists of the period (p. 81). Dart's remarks on the efforts of Bull's contemporaries George Waterhouse, Elway Bevin, and John Farmer are disparaging, although he found some merit in the set of 29 canons once attributed to Byrd.[6] Within the chapter, Dart devoted most attention to outlining the contents of each of the three manuscripts thought to contain Bull's canons. He discussed also the status of canon in England at this time, particularly how it may have influenced musicians' views, not only towards compositional practice and training, but also towards each other. Notably absent in Dart's work is any detailed analysis of the canonic writing, a matter to which I will return below.

Dart noted that the canons in each of the three principal sources are generally arranged according to increased levels of complexity, normally beginning with two parts in strict imitation in similar motion against the plainsong, then proceeding to devices such as inversion, retrograde, augmentation and proportional rhythms for increasing numbers of parts, usually up to six or seven. The attributions to Bull in two of these sources, Österreichisches Nationalbibliothek Mus. Hs. 17.771 (hereafter Vienna 17.771) and British Library RM 24.f.25, seem reasonably secure. The contents of British Library RM 24.c.14, attributed to Elway Bevin, is more problematic – Dart claimed that many of the canons in this source are by Bull not Bevin.

6 This attribution was later disproved by Philip Brett in his work for the *Byrd Edition* (Brett 1972).

Another source for Bull's canons is the so-called Sweelinck theory manuscripts which contain a single canon attributed to Bull (Sweelinck ed. Gehrmann 1901, 84). This canon is also found in the two British Library manuscripts: once in RM 24.c.14 and twice in RM 24.f.25. These sources are summarized in Table 1.

Table 1: Sources for John Bull's canons.

Source and Date	Contents	Attribution
Vienna 17.771, 17th c.	120 canons. Most on *Miserere*	John Bull
BL RM 24.c.14, 17th c.	Approx. 300 canons. Most on *Miserere*	Elway Bevin
BL RM 24.f.25, 18thc., copy of lost original	26 canons. 13 on *Miserere*	21 by John Bull
Sweelinck, Composition Rules, 17th c.	1 double canon	John Bull

The Vienna manuscript is a small leather-bound, oblong manuscript of 9 x 12 cm. It is very fragile with much bleed-through and corrosion. This source has attracted attention from scholars because it contains fifteen keyboard pieces in tablature, thirteen at the beginning of the manuscript, two at the end (Van der Meer 1959, Cunningham 1984). However, the canons, which form the bulk of the contents, have not received any scrutiny apart from Dart's unpublished work and consideration of them in my study of Elway Bevin (Bevin ed. Collins 2007, 32-40). Both van der Meer and Cunningham note the large number of canons in the Vienna manuscript but neither devotes any attention to them. Dart may have been overstating the case when he said that "Bull's studies in canon appear to have left a very distinctive mark on his keyboard music" (p. 79). Affinities between the two areas will be considered below.

The approximately three hundred canons in British Library RM 24.c.14 are organized around five groups of numbered pieces, but there are many places where additional pieces are inserted in margins or between numbered pieces, leading to a sometimes chaotic presentation. Dart claimed that all of the numbered canons were by Bull, noting that many of them also appear in Vienna 17.771.[7] British Library RM 24.f.25 is an eighteenth-century copy of a lost original and is noteworthy for its depiction of canons as circles, triangles, wavy lines and other shapes. Most of its twenty-six canons are attributed to Bull with the rest attributed to Clemens non Papa (one), Messaus (three) and anonymous (one). Most of Bull's canons in this manuscript are also found in the other sources –six canons in the Vienna manuscript, two versions of Bull's canon in the Sweelinck collection (mentioned above), and a version of the canon copied

7 I have identified 50 canons in common between these two manuscripts (Bevin ed. Collins, 32-33).

by Purcell and examined by Dart (1963).[8] The manuscript RM 24.f.25 (or at least its contents) was known to John Hawkins who reproduced several of the canons with their solutions, including two notated in the shape of triangles (Hawkins 1963, vol. 1, 297-301). Hawkins's text provides a short overview of canonic writing in late sixteenth-century England that relies heavily on passages quoted from Morley (1597) and examples attributed to Bull and Byrd. The examples he attributes to Byrd are drawn from British Library Add. Ms 31391, although Hawkins nowhere acknowledges the sources for his canonic examples.

Notwithstanding the attributions to Bull in the sources (Vienna 17.771 and RM 24.f.25), it is very difficult to say with certainty just how many of the canons are actually by him. For instance, the last canon in Vienna 17.771 is for seven parts, of which two are in canon at the unison, four are in double, triple and quadruple augmentation, and the last is a free part. Dart's normally acute eye missed that this is actually a copy of Tallis's motet, *Miserere nostri*, published in the *Cantiones sacrae* of 1575 (for a modern edition see Byrd ed. Monson 1977). Dart did, however, note that the first of the keyboard pieces located at the beginning of Vienna 17.771 is attributed to Sweelinck in two other manuscript sources, remarking that "it is very much in his style." This further underscores the unreliability of Gulielmus à Messaus, the probable copyist of the pieces in Vienna 17.771, in attributing everything in this manuscript to Bull. Dart suggests that Messaus may have compiled this manuscript around 1621. That Tallis's *Miserere nostri* is placed at the end of Bull's collection of progressively more complex canons is testament to the high regard in which Tallis's work was held by Bull, and it also recalls the uncertainty over other canons tentatively attributed to Tallis by the modern editors of Bull's music published in *Musica Britannica*, volume 14 (Bull ed. Steele, Cameron and Dart 1967 [hereafter *MB* 14]). However, Christopher Maxim (1998-99) suggests that we should retain the possibility that Bull may have written several of these doubtful pieces as student exercises.

Similar questions linger over the canons in RM 24.c.14. We cannot be certain that Bevin or another unknown composer wrote some of them and that the compiler of the manuscript set them down with little regard for their correct attribution. For instance, several of the unnumbered canons appear in Bevin's 1631 treatise, which is understandable if Bevin actually wrote them and later drew on them for his published work. More troubling, however, is the appearance in Bevin's treatise of one of the numbered canons from this manuscript. A piece numbered 52 on f.. 79^{v}-80^{r} of RM 24.c.14 appears on pages 45-46 of Bevin's *Instruction*. This puzzle canon for sixty parts is uninteresting musically and falls below the standard of craftsmanship otherwise found

8 Unlike Purcell's copy, reproduced in facsimile in Dart (1963, 31), in RM 24.f.25 the parts are not scored or barred.

throughout Bull's canonic output. If all of the numbered canons are in fact by Bull, as Dart believed, then Bevin would appear to have passed this canon as his own in his treatise. Alternatively, this canon may be by Bevin or perhaps even by someone else and its attribution to Bull by Dart is erroneous. In any event, scholarship on Bull has long recognized that questions of authorship and attribution are fraught with difficulty (Jeans and Neighbour). In his study of the Bull-Messaus Codex, Rudolf Rasch (1996, 110) describes the situation succinctly in terms that are pertinent to any research on Bull: "it may be said that Add. Ms 23.623 was meant by its scribe basically to be a collection of works by Bull" and that other pieces "may have been attributed to Bull because they were copied from anonymous exemplars written by Bull, whereas a handful of such pieces was left anonymous." I believe that most of the *Miserere* canons in the sources, including the majority of the numbered pieces in RM 24.c.14, are in fact by Bull though with the possibility that some may be by Bevin or even other composers such as Tallis or Bull's teacher, John Blitheman.

In all, about 300 canons by Bull survive, almost all of them on the *Miserere* plainsong. Dart suggested that he may have composed a large number of them for his BMus degree from Oxford in 1586, though it is possible that he may have written many others at different periods of his life. Pieter Dirksen (2002) suggests that Bull may have spent his last decade in semi-reclusion in Antwerp and shifted his interests from keyboard music to canonic composition. However, many of Bull's canons are in common to both Vienna 17.771 and British Library RM 24.c.14, suggesting that they could have been in circulation before his permanent departure from England in 1613.

Dart referred to the inferior quality of canonic writing by all of Bull's contemporaries but provided no analytical insight into why he esteemed Bull's works as being so much better than those by anyone else. There are no detailed descriptions of any of the hundreds of canons included in his survey of relevant sources, and not a single canonic example is provided in Dart's text, although in one place a marginal annotation suggests that the *Miserere* melody was to be included in a later draft. Dart's own attitude is revealing: after describing how the contents of the Vienna manuscript are ordered, he states airily that a "technical analysis of this kind makes arid reading" (p. 83) and refuses to probe the inner workings of the canons or to identify in what ways Bull's solutions to specific technical challenges elevated him to "a class by himself as a canoneer" (p. 79). I believe that this is an unfortunate aspect of Dart's outlook, leaving the reader to take on faith his belief in Bull's contrapuntal excellence, expressed in the comment that "the Vienna canons are an astonishing document, and I do not doubt that it was of this kind of works, not his written keyboard pieces, which ensured Bull's legendary fame during his lifetime" (p. 83).

Before turning to consider analytical approaches to Renaissance counterpoint and canon, it is worth mentioning the other topics that Dart dealt

with in his chapter on Bull's canons. Especially intriguing is his curious hypothesis that composers such as Bull, Blitheman, Waterhouse, Bevin and Byrd maintained a reactionary outlook towards composition through their cultivation of plainsong-based counterpoint. Dart noted the modal orientation, weak cadential articulation and phrases of any length associated with this type of writing. Strict but arbitrary rules are applied to abstract patterns of canonic imitation, which could be employed at any interval, and also to proportional cross-rhythms, use of sequences, and ostinato patterns. He collectively described these musicians as "canonic descanters" and traced their output from the summer canon to the Mulliner book and into the later sixteenth century. Dart claimed that members of this group "are almost unknown as vocal composers, perhaps because great skill in descant and canon could be developed only at the expense of great skill in imitative counterpoint" (pp. 80-81). He credited another group, labeled "harmonic contrapuntists," with what he calls "up-to-date, forward-looking" (p. 81) tendencies towards tonality, Baroque rhythm, regular phrase structure and cadential articulation on a few well-defined pitches. He singled out Morley and Gibbons as fine representatives of this tradition, along with Coprario, Campion and Butler. Other composers, such as Tomkins, Cosyn and Carlton, sat somewhere in between the two camps ("lacking the bite of the descanters and the charm of the contrapuntists," p. 81). In sum: "Of the descanters, Bull is undoubtedly the most outstanding, though Byrd is incomparably the greatest genius of them all" (p. 81).

It is easy to dissect Dart's views here: an old-fashioned view of progressive and evolutionary directions in music, his association of the canonists with keyboard music only (surely a great disservice to Byrd's achievements in vocal polyphony and overlooking Bevin's fine pieces for the Anglican church, still performed today); his acceptance of Byrd's authorship of what are now regarded as spurious works in British Library Add. Ms 31391; and his seemingly all-encompassing generalization of English music history until ca. 1620 as comprising these two near-exclusive camps. Yet Dart was perhaps sensing a need to articulate the prominent role of plainsong-based counterpoint amongst musicians of Bull's generation and earlier. Modern histories of English music of the sixteenth and seventeenth centuries are little concerned with the status of canon and plainsong counterpoint, notwithstanding that these activities occupied considerable attention of many musicians of the time. This may be in part due to the limited circulation of materials in manuscript form and also because after this approach to composition fell from view ca. 1620, after which it "stayed underground for the best part of three centuries. Now and again it bubbled above the ground" (p. 90). Dart mentioned Locke, Purcell and Bach as later

representatives of the tradition, which was resurrected in earnest in the serial music of the twentieth century.[9]

A similar situation was identified by Sergio Durante in Italian contrapuntal compendia of the same period (Durante 1987).[10] Durante noted the difficulties in evaluating works that could be regarded as symbols of prestige but which were perhaps seldom intended for performance and never seriously rivaled the importance of developments elsewhere in seventeenth-century music. Yet recent scholarship has identified a greater prevalence of improvised counterpoint over plainsongs in daily musical life than Dart or Durante perhaps ever suspected. Philippe Canguilhem's study of Vicente Lusitano's manuscript treatise on improvised counterpoint points to an array of contrapuntal processes (including canonic imitation) that skilled musicians were expected to demonstrate in many aspects of professional life, including in auditions for positions of cathedral choirmaster across Europe (Canguilhem 2011). Folker Froebe has shown how many of the technical procedures described in Lusitano's published treatise and by other writers are manifest in written compositions of the late sixteenth and seventeenth centuries (Froebe 2007). These studies open up new avenues for research on the role of counterpoint in its improvised and written forms on musical life of the period, and they help us place in perspective Dart's sense of how plainsong canons were a significant priority for many of the most distinguished musicians of the time.

Elsewhere in his chapter on canon (pp. 78-79), Dart speculates that Bull may have written a set of canons as part of a competition with his great Dutch contemporary, Jan Pieterszoon Sweelinck. Dart refers to Anthony à Wood's short but somewhat unclear passage (Wood 1691) about how Bull was travelling incognito in Saint-Omer ca. 1601 and responded to a challenge from a "famous Musician belonging to a certain Cathedral, (at *St-Omer* as I have heard)." Dart suggests that Saint-Omer may be a near anagram of Amsterdam and that Bull visited Sweelinck and engaged with him in an amicable competition in writing canons. According to Dart, Sweelinck's contribution to the competition comprised a now-lost set of canons using a well-known Reformed Church chorale as their plainsong, "Wenn wir in höchsten nöthen seyn". Dart pointed out that there is a set of twenty-one canons on this plainsong in RM 24.c.14, including the same canon by Sweelinck that appears in his theory manuscripts

9 Dart noted also (p. 90) that the "artificial pleasure of 3 against 2 and 4 against 3 are one of the many delights of Mr Bernstein's West Side story, and such virtuosi as Mr Miles Davis and Mr Oscar Petersen or the Modern Jazz Quartet have rediscovered the charms of ostinato, of syncopation ('driving an odd Mynome to the end', as Bevin called it), and strict tonal canon."

10 Dart was apparently unaware of the contributions of Italian masters during this same period: Romano Micheli, Francesco Soriano, Paolo Agostini. For an account of these composers and their output see Lamla (2003).

where it is placed beside a canon by Bull on this plainsong, the only instance of Bull's work quoted in Sweelinck's treatise. Regardless of the actual truth of this scenario, Dart's vivid historical imagination conjured up an intriguing vignette of friendly canonic rivalry amongst two eminent composers. A similar competition between Byrd and Ferrabosco the Elder was mentioned by Thomas Morley, although there is no known source containing the results.[11] These hypothetical scenarios at least underline an important aspect of musical culture in England and on the continent in which canons appear to have been more widely circulated and studied than has hitherto been recognised.

An alternative interpretation of Wood's passage proposed by Davitt Moroney is that Bull may have seen a copy of Alessandro Striggio's *Missa sopra Ecco sì beato giorno* for forty and sixty parts in the Music School of the cathedral at Saint-Omer (Moroney 2007). There are very few known works corresponding to what Wood calls a "Lesson or song of forty parts," and Moroney traces the circumstances that led Striggio to pass through Flanders with a copy of his mass in the 1560s. In Wood's story, Bull added another forty parts to the work he had seen ("added *forty more parts* to the said *Lesson or Song*"). This may well be a likely garbled version of the actual events, though it is more believable that Bull wrote a set of forty canons than turned a forty-part work into an eighty-part colossus.[12] If this is the case, then further questions arise about the authorship of the surviving twenty-one canons on "Wenn wir in höchsten nöthen seyn" in RM 24.c.14 as it is possible that this set may include more than one canon by Sweelinck.

A topic that Dart treated with relish is Morley's apparent refusal to acknowledge Bull's accomplishments in his monumental *A Plaine and Easie Introduction to Practicall Musicke*. Dart claimed that Morley's intense jealousy of Bull's successes – as Gresham College lecturer, as canonist, and as esteemed keyboard virtuoso – is manifest at several places in the treatise. For instance, "one consistent omission strikes like a blow in the face:" Bull's name is conspicuously absent in Morley's extensive list of all of the English authorities whom he consulted in the preparation of his treatise. Interestingly enough, Bull's teacher Blitheman is also absent. This list, which appears on the last page of the treatise, includes some relatively obscure figures; for instance, John Hodges, organist at Hereford where he was a colleague of Bull. Earlier in the text, Hodges (but not Bull) is mentioned along with several other composers who are adept at "breaking the plainsong." These other named composers are Redford, Tallis, Preston, Thorne, Shelbye (Morley 1597, 96; Morley ed. Harman

11 Thomas Morley refers to a "vertuous contention" in which each composer supposedly wrote forty canons on the *Miserere* plainsong (1597, 115; Morley ed. Harman 1973, 202).

12 The possibility that Wood thought that Bull added forty parts to Tallis's motet *Spem in alium* is reviewed in Ellis (1999, 28).

1973, 177). Elsewhere, Dart notes that Morley's disdainful quotation of the chromatic "point which our organists use" is at a pitch that Bull uses in his Chromatic Fantasia (Morley 1597, Annotations; Morley ed. Harman 1973, 177; also Steele, Cameron and Dart 1967). In his treatment of canonic writing, Morley twice commends the work of "my friend and fellow M. *George Waterhouse*, vpon the same plainsong *Miserere*, for varietie surpassed all who ever labored in that kinde of studie," yet no mention is made of Bull's canons on the same plainsong (Morley 1597, 115 & 183; Morley ed. Harman 1973, 202 & 307).[13]

The student Polymathes admits that his previous instruction in music was from one "Maister Boulde."[14] This could be a fictional character or an unknown minor English musician, but Dart suggests that contemporary readers could easily have made a connection to Bull through the popular Elizabethan proverb "as bold as a bull." This figure serves as a vehicle for Morley's complaints, for instance, in a passage where Polymathes introduces an example from a Taverner Kyrie, "which Maister *Bould* and all his companions did highly commend for exceeding good." However, the Master finds several errors in it, notably the false relation in the closing cadence that "is very usual with our organists" (Morley 1597, 153-54; Morley ed. Harman, 258-59). Dart claims that "Bull uses the same progression in one of his canons," and Harman points out (p. 259, note 4) that this cadence is "characteristic of the English school" and refers to an example from Morley's madrigals.

At various places in his text, Morley through the Master criticizes certain procedures in the compositional exercises submitted by the two students, Philomathes and Polymathes. Dart asserts that these are frequently found in Bull's canonic output and sometimes nowhere else in surviving English music. These include ostinato patterns against a plainsong, tritone leaps, rhythmic ratios such as three minims against one plainsong semibreve, and sudden endings.[15] By ostinato patterns Dart means use of the same point of imitation more than once in a plainsong setting, instances of which are frequently encountered in Bull's canons (for instance, see Example 2 below). Bevin includes several examples of this technique in his treatise where it is called the "manner of maintaining a

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13 There is a blank space in Dart's typescript on p. 93 where he likely intended to insert the quotation given above. A little earlier in his text (p. 77), Dart criticizes Waterhouse's canons as lacking "the refined accomplishment of imagination of Bull's canons."

14 At the beginning of Part Three of the *Introduction* Polymathes joins the lessons taken by his brother Philomathes from the Master.

15 These criticisms are made at various places in Morley's *Introduction*, pp. 84, 86, 89, 90, 159, 162 and at the end of the Annotations to part 1. The corresponding pages in the edition by Harman are 162, 164, 168, 170, 267, 270-71, and 136. Unfortunately, Dart does not specify which exactly of Bull's techniques criticised by Morley are not found elsewhere in music of the period.

point" (Bevin ed. Collins 2007, 72). Both Bevin and Bull demonstrate proportional exercises and examples with arbitrary but fixed rhythmic relationships. Bevin is systematic in his presentation of examples from note against note to nine notes against one plainsong note (Bevin ed. Collins 2007, 70-72). Other examples may be seen in the Mulliner Book.[16]

Dart sees the shadow of Bull in yet further passages of Morley's *Introduction*. Morley's criticisms of complexity in music without resulting musical merit may be targeted at Bull and his fellow canonic descanters. For instance, Morley complains about the tendency amongst some English composers to notate their canons in one part only, without accompanying signs to indicate the entries of the imitating voices: "which vse many times caused diuers good musicians sitte a whole daie, to finde out the following part of a *Canon*: which being founde (it might bee) was scant worth the hearing" (Morley 1597, 104; Morley ed. Harman 1973, 186). In the Peroratio, Morley swipes at the "filed speech, rhetorical sentences" used to describe music, possibly a reference to Bull's inaugural Gresham lecture, which according to Dart was filled with "extraordinarily florid" prose (Morley 1597, 183; Morley ed. Harman 1973, 305). Earlier in the typescript (pp. 60-61), Dart says that he could deduce the opening page of Bull's Gresham lecture from a faint offset in reverse on the back of the title page. Given the date of the lecture as October 6th, 1597, Dart suggested that Morley must have been still working on the Peroratio of his treatise after this date. The text of the offset page has been deduced and presented in full by A. Hyatt King (1959).

Any personal animosities between Morley and Bull – both organists and possible Catholics at different points in their lives – are otherwise undocumented and unknown to us. Yet Dart believed that there was enough internal evidence in Morley's *Introduction* to amply portray a fierce professional jealousy. It is possible, however, that two issues have been conflated by Dart, one being the omission of all reference to Bull in Morley's treatise and the other involving Morley's criticisms of specific technical processes in plainsong settings. The latter may simply be Morley's attempt to steer students away from putting into their vocal settings certain procedures that he deemed more appropriate in keyboard writing. It is possible that Dart's intuition may have led him to suspect a complex relationship between Morley and Bull, but without any further historical evidence it is very difficult to judge any influence this could have had on Morley's pedagogical outlook and presentation.

16 An example is William Shelbye's three-part *Miserere* setting where one part has three semibreves against two in the plainsong and the other part has nine minims against two plainsong semibreves. See *Musica Britannica*, vol. 1:41 (ed. Caldwell 2011, 62-63). These two ratios are also demonstrated by Bevin (ed. Collins 2007, 70).

Despite being written over four decades ago, Dart's unpublished work on Bull is still worth taking into account by scholars working on topics related to Elizabethan music and to the history of counterpoint more generally. Dart was the first to recognize the significance of Bull's plainsong canons as an essential channel for his creative and intellectual energies and perhaps even the primary reason for Bull's fame during his lifetime. He also recognized the importance of canon and related techniques in the training and professional outlook of musicians. Dart's emphasis on Bull's intellectual accomplishments is echoed somewhat in John Irving's recent caution against the common reception of Bull's music (Irving 2008). Irving traces how the technical virtuosity of Bull's keyboard works has been contrasted since the time of Thomas Tomkins with the perceived greater intellectual content of Byrd's keyboard music. Dart's findings were known to Susi Jeans, who chose not to disclose them in her article on Bull in the *New Grove Dictionary of Music and Musicians* (1980) where there is only a cursory mention of the canons (repeated in the 2001 and online versions of this resource). That Lady Jeans thought highly of Dart's work on Bull is revealed in some items of correspondence in the Archive that refer to her attempts, sadly unsuccessful, to find a suitable publisher for the monograph.

Aspects of Bull's Canonic Writing

Dart's study of Bull's canons is mainly concerned with the sources and their contents, not with analysis of the canonic procedures. This avoidance of contrapuntal analysis was by no means unique amongst scholars of his generation. In his studies of imitative processes in music by late fifteenth- and sixteenth-century composers, John Milsom notes the paucity of investigations in this area in twentieth-century musicological and pedagogical texts (Milsom 2005a, 296). It is difficult to account for this state of affairs, though Milsom suggests that it may partially reflect the absence of detailed descriptions of how to write imitative counterpoint in contemporary treatises of the late fifteenth and sixteenth centuries, which instead mainly dealt with associated issues of mode, melody and terminology (see, for instance, Haar 1971, Walker 2000). Joseph Kerman's pioneering study of imitation as a structural tool in the music of Byrd and Tallis, first published in 1966, is a notable exception in twentieth-century literature and has remained a key text on Elizabethan music (Kerman 1994). Yet Kerman's work was not followed up by any major studies of imitative processes in Renaissance music, whether on a single composer or a comparative study across several composers. Milsom (2005a, 293 note 1) remarks that "it is astonishing to see how rarely musicologists have followed Kerman's lead by attempting to tackle the 'key topic' of imitation head on, through the analysis and critical evaluation of specific works."

This situation suggests that Dart and other scholars of his generation considered it largely unnecessary to undertake detailed investigations of

contrapuntal textures in Renaissance music. Dart's avoidance of analytical engagement with Bull's canons can be viewed in this context: his meticulous and imaginative engagement with biographical source materials and questions about the composer's work-list are unfortunately unmatched by a comparable assessment of the technical underpinnings of "Bull's extraordinary *tour de force* in canon" (p. 93). It is only in recent years that the pioneering studies of Milsom and a small number of other scholars have begun to address the central role of contrapuntal techniques in music of the fifteenth and sixteenth centuries (Milsom 2005a, 2005b, 2012; Grimshaw 2007). These studies focus on *fuga*, a term taken to mean imitative processes applied to a melodic line involving substantial pre-compositional planning on the part of the composer. *Fuga* may occur briefly in a polyphonic work or globally as in the case of canon. Much of this research has been focused on the music of Josquin and early sixteenth-century composers and has also addressed terminological deficiencies in historical and modern writings. It has sought to uncover the rules governing different kinds of contrapuntal configurations and to explain how study of *fuga* may aid our understanding of specific compositional choices, but there has not yet been a systematic study of the strictest form of *fuga* – canonic writing. The close association between canon and plainsong settings particularly merits close scrutiny, and the contributions of Bull in this regard would provide fertile material for examination. This task is impeded by the huge number of plainsong canons by Bull and his English contemporaries (about 1500 in my estimation) and their location in a small number of manuscript sources. However, the systematic presentation of canonic subtypes in these sources from simple to more complex pieces could provide a useful starting point to uncover mechanisms by which composers solved specific technical problems, giving information of relevance to broader studies of counterpoint.

Milsom stresses that a composer of the stature of Josquin very likely worked out beforehand the range of possibilities for a given *fuga* subject. The composer would choose carefully where to place the *fuga* entries, and the order of their presentation may not necessarily reflect the order of conception. It is possible that the most intricate combinations may occur at moments of structural significance, perhaps reflecting a salient aspect of the text being set (if one is present). It is also possible that not all *fuga* combinations appear in the final version of the work. Milsom uses the term "interlock" to describe when "two or more statements of a subject are partially superimposed upon one another polyphonically." He also introduces the term "flex" for when a *fuga* subject's intervallic content is modified as it passes between voices, e.g., a fifth may become a fourth, and vice-versa (Milsom 2005a, 343-45).

Canonic imitation may be regarded as a subtype of *fuga* in which imitation between the parts lasts for the entire composition, or at least a substantial part of it. A major difference between canon and other types of *fuga* is that canon does

not permit flexing of the subject as it is passed from one voice to the next, although a varied form of the subject can appear at different stages of the composition. Furthermore, in canon only one interlock is used for the duration of the piece, whereas *fuga* can employ different interlocks at different places, potentially altering the time distance or entry interval between the parts. Compositions involving *fuga* may also contain passages of free counterpoint where the *fuga* subject may be entirely absent or may appear as a singleton, i.e., without another part imitating it. These situations do not obtain in canon where the interval of imitation and time distance between parts are established at the outset and maintained for the duration of the composition. These differences have significant consequences for the analysis of Renaissance repertoire. For instance, a composer can exploit various interlocking and flexing potentials of *fuga* material at different places in a composition for different purposes. This means that patterns of heightening or relaxation of the contrapuntal texture may be less apparent in canonic writing than in other contrapuntal textures. "Heightening" and "relaxation" are terms first introduced by Joel Lester in his study of the music of J. S. Bach to describe contrasts in textural intensity that may occur within a work (Lester 2001). This idea was also explored by Peter Schubert in his study of Palestrina's motets (2007), and it is a very useful means of observing a composer's different methods for achieving structural balance and cohesion. Notwithstanding various differences in the construction of *fuga* and canon, recent studies of *fuga* provide very important starting points for examining how thematic material is transformed through imitative processes during the course of a composition.

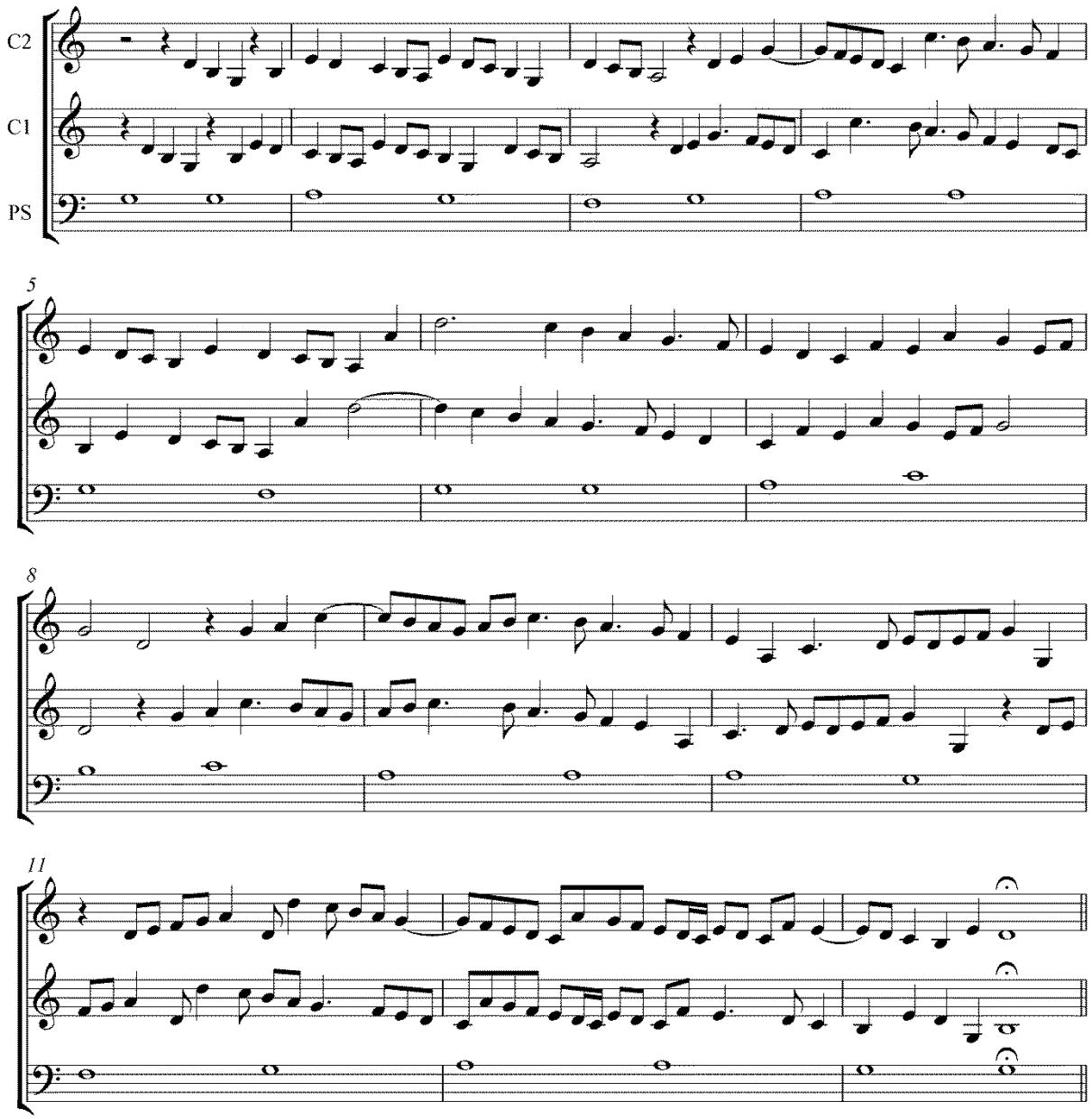
A plainsong influences a composer's decisions on how to distribute and develop motivic material. This is especially true when there are repetitions of sections of the plainsong melody, whether an immediate repetition of the same notes or their recurrence elsewhere in the work. The composer may choose to reuse material presented earlier in the imitative voices or to present new material. The constraints of canonic imitation make the former case particularly interesting to observe. Modular analysis, which involves identifying repetition of melodic segments in two or more voices, is a potentially very important tool here. In his pioneering study of modular counterpoint, Peter Schubert defines a module as "a contrapuntal combination that repeats both melodies and vertical components" (Schubert 2007, 487). Although Schubert's investigation of Palestrina's modular textures did not include consideration of motets with plainsongs, a recent study by Julie Cumming of motets by Heinrich Isaac demonstrates the applicability of this approach to plainsong-based counterpoint (Cumming 2011). Therefore, it is worthwhile to consider if Bull treats specific plainsong notes as modular segments that form recurrent combinations with one or both canonic voices or perhaps also with a free part (if present).

The *Miserere* plainsong involves two instances of repetitions of melodic segments: notes 3-6 recur as notes 8-11, and also notes 3-9 recur as notes 19-25 (the *Miserere* is present in each of Examples 1-4 below). The second, larger instance of repetition is especially interesting due to the potential for symmetrical structure in the resulting contrapuntal texture. We could expect to see repetition of compositional materials between these sections and perhaps a textural contrast for the intervening notes, which coincide with the beginning of the second phrase of the *Miserere* at note 13. If Bull exploited this structural potential, then it should be possible to identify such techniques as repetition, the development of *fuga* subjects and utilisation of the same underlying voice-leading schemes. The last of these options is particularly important because it can allow for the same or different *fuga* statements. I propose that Bull utilizes all of these structural possibilities inherent in the *Miserere* melody.

In Schubert's examples, modular analysis involves repetition of a two-part combination (sometimes up to three or four parts) with intervallic progressions intact between the parts at the same or transposed pitch, unless altered according to the principles of invertible counterpoint. Variants or flexing of intervallic and melodic content between statements of modules is possible, as demonstrated in the examples investigated by Cumming. In the case of Bull's canons, modular analysis is evident in several places, but Bull's structural planning becomes clearer when we compare note-against-note reductions of settings at plainsong notes 3-9 and 19-25. At these two sections of the melody, and to a lesser extent between notes 3-6 and 8-11, Bull appears to have paid particular attention to their structural potential. The notion of modular analysis could therefore be extended to include repeated voice-leading reductions that may be associated with different types of diminished counterpoint in the finished work. However, Schubert's methodology pre-supposes that modules are the basic building block of entire compositions or substantial portions of them, whereas the note repetitions observed in the *Miserere* plainsong provide fortuitous points for structural correspondence rather than a general principle for writing counterpoint. More generally, a composer of plainsong canons must maintain a succession of consonant progressions between the plainsong and first canonic voice to ensure consonant outcomes with the entry of the second canonic part against the same or a following plainsong note (Collins 1993, Collins 2008). In my discussion of Examples 1-4 below, I will investigate different ways in which Bull builds structural coherence from underlying voice-leading schemes dictated by the melodic profile of the plainsong. I do not propose a thorough taxonomy of Bull's compositional strategies for plainsong canons but rather point to some of the ways in which Bull maintains tight structural control over his materials.

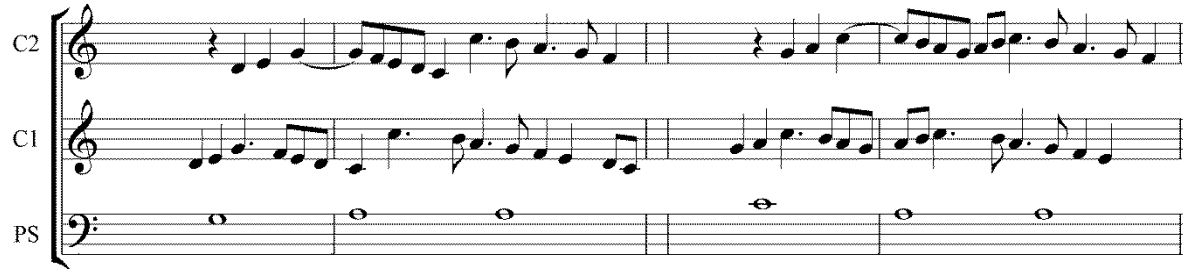
Example 1a is a two-part canon at the unison above the *Miserere* plainsong, and Example 1b demonstrates a module in the canonic parts above plainsong

notes 6-8.[17] This module reappears against plainsong notes 16-18, where the opening is transposed up a fourth to accommodate the change of first plainsong note from G to C, but otherwise the same pitches are heard against the repeated A in the plainsong (the octave leap between the notes C over plainsong note 7 is replaced by an ascending third at plainsong note 17).



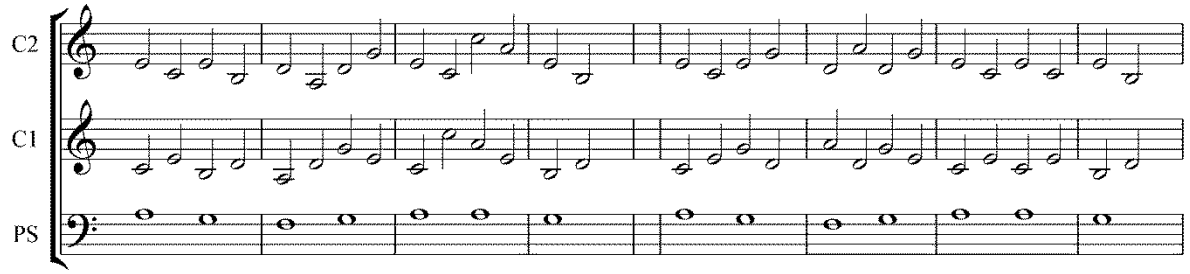
17 Vienna 17.771, canon 18, f. 39^{v}-40^{r}, and British Library RM 24.c.14, canon 1, f. 1^{v}-2^{r}. There are no variants between these sources for this piece, although at places the Vienna manuscript is very difficult to read due to its poor state.

Example 1a: Bull, Canon at the unison after a minim on the *Miserere* plainsong. Vienna Nationalbibliothek Mus. Hs. 17.771, f. 39^{v}-40^{r}, and British Library RM 24.c.14, f. 1^{v}-2^{r}.



Example 1b: Module at plainsong notes 6-8 (bars 3-4) and 16-18 (bars 8-9).

Other modular repetitions of this kind are difficult to discern in Example 1, and in general they do not seem to form a major component of Bull's canonic writing. That said, voice-leading reductions between plainsong note onsets between notes 3-9 and notes 19-25 reveal that the same underlying harmonic scheme is used in both places (see Example 1c).[18]



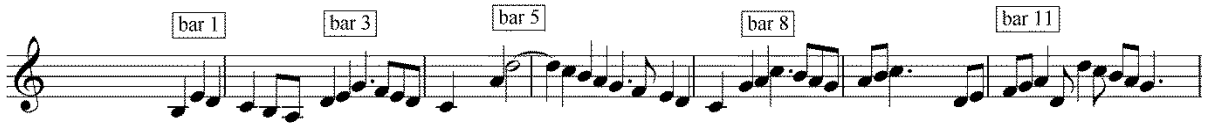
Example 1c: Voice-leading reductions at plainsong notes 3-9 and 19-25.

This partly results from the very restricted range of available combinations between plainsong and C1 (the first canonic voice) in a canon at the unison over a plainsong. When the plainsong descends by step, it can only form a fifth with C1, which leads to a sixth between the next plainsong note and C2 (the second canonic voice). Likewise, ascending stepwise motion in the plainsong can only be accommodated by a sixth with C1, which leads to a fifth between C2 and the next plainsong note – see plainsong note 19 (bar 10) where A-E between plainsong and C1 become G-E between plainsong and C2. Because this canon is at a minim distance, these calculations have involved the second C1 minim against the plainsong semibreve. For unison progressions in the plainsong, a

18 The voice-leading reduction in this example is based on note onsets at the minim time distance of the canon.

much greater choice of interval combinations with C1 are available (unison, third, fifth and sixth). This situation also applies to calculations involving the first C1 minim, which will be imitated by C2 against the same plainsong note. Nevertheless, Bull often chose the same intervallic combinations for unison progressions between the plainsong and C1 even where other combinations are possible, as shown in Example 1c

Example 1d presents the thematic material used in this canon. The opening *fuga* subject evolves into related ideas whose placement corresponds with Bull's division of the plainsong into approximately equal sections that are not aligned with the lengths of the plainsong's two phrases, a feature common to many of the canons and also to Bull's keyboard music. As John Irving has observed in relation to keyboard plainsong settings, Bull adopts procedures used by his teacher, John Blitheman: a fondness for symmetrical structures and ways in which motives evolve logically with interconnections not only through similarities of melodic and rhythmic contour but also through devices such as inversion and retrograde motion (Irving 1994). Irving points to similar procedures in settings by Bull, who was Blitheman's most distinguished pupil, specifically in "Miserere 3" and in the settings whose authorship by Bull or Tallis was unresolved by the editors of *MB* 14. Recalling his teacher Blitheman, in Example 1a Bull divides the plainsong into five sections of approximately equal duration (cadential articulation occurs on notes 5, 10, 15, 20 and 25 of the chant), thereby constructing a loosely symmetrical texture overall. Note how the second and fourth subjects of Example 1d are based on the same idea and how the central third section uses a partially augmented version of that idea. The canonic parts use a succession of related *fuga* subjects based on an upward leap of a third or fourth followed by a descending filled-in fifth. The opening descending D-B-G triadic motion is offset by means of a rest from the structurally much more significant subject commencing on the second plainsong note: an upwards B to E followed by a descending filled-in fifth. Example 1d traces the evolution of this idea through successive sections in the opening canonic part (in each case on upbeats) at bars 3, 5, 8 and 11.



Example 1d: Motivic relations (first canonic voice).

The harmonic correspondences indicated by Example 1c provided Bull with a mechanism for keeping tight structural control in his canonic writing. In his keyboard plainsong settings, Walker Cunningham and John Harley have noted Bull's mixed achievements in maintaining structural coherence. Cunningham

judges as most successful those pieces that clearly demonstrate the structural principle of "a series of sections differentiated by changes in rate of movement and corresponding changes of motive" (Cunningham 1984, 36-37). He is critical of "Miserere 3," which he regards less favourably than Irving, for its lack of melodic organization ("motives are little more than isolated, matter-of-fact events"), whereas "Miserere 1," "Salvator mundi 1" and the *In nomine* settings integrate changes of rhythmic rate and motive much more successfully.[19] Bull's general tendency to rely on "constant change and perpetually renewed figuration" rather than a clearly thought-out plan for controlling a work's development is noted by John Harley, who further points out many instances of fragmentation even in Bull's most successful works (Harley 1994, 46-55). In the canons, however, such tendencies are brought under firmer control not only by the requirement of strict imitation but by the opportunities for overall structural cohesion provided by the plainsong's melodic profile. This is most evident in Bull's compositional choices at the repetition at the plainsong notes 19-25, where he retains the same intervallic scheme heard at notes 3-9 but disguises it through rhythmically more active ascending figurations that bring the piece to a close.

Example 2a is another canon at the unison over the *Miserere* plainsong, here also accompanied by a free part in the bass register.[20] The first plainsong phrase (ending on note 12) is set to four presentations of the same descending *fuga* subject. This saturation of the texture with a carefully worked out *fuga* interlock starting on different pitches (G, C, F, C) is briefly broken by contrasting upward material at the beginning of the plainsong's second phrase (notes 13-16) However, descending melodic material that resembles the opening idea quickly takes over and a variant of the *fuga* statement is presented at plainsong notes 19-25.

Bull's use of rests (at plainsong notes 4, 5, 20, and 21) is subtle, not only because they draw attention to an entry of a *fuga* subject but also since they allow him to use notes in other voices that may otherwise form dissonant intervals if all parts sounded simultaneously (see, for instance, in Example 2a, the onsets of plainsong notes 5 (bar 3) and 20 (bar 10)). In these situations, consonance against the *fuga* entries is ensured through passagework in diminished counterpoint in the other canonic voice or free bass part. The bass plays an important role in this process by also providing necessary harmonic support under otherwise inadmissible bare fourths sounding amongst the higher parts (see plainsong notes 4, 5, 9, 12). Example 2b shows how Bull utilizes a very similar harmonic scheme between plainsong notes 3-6 and 19-25.

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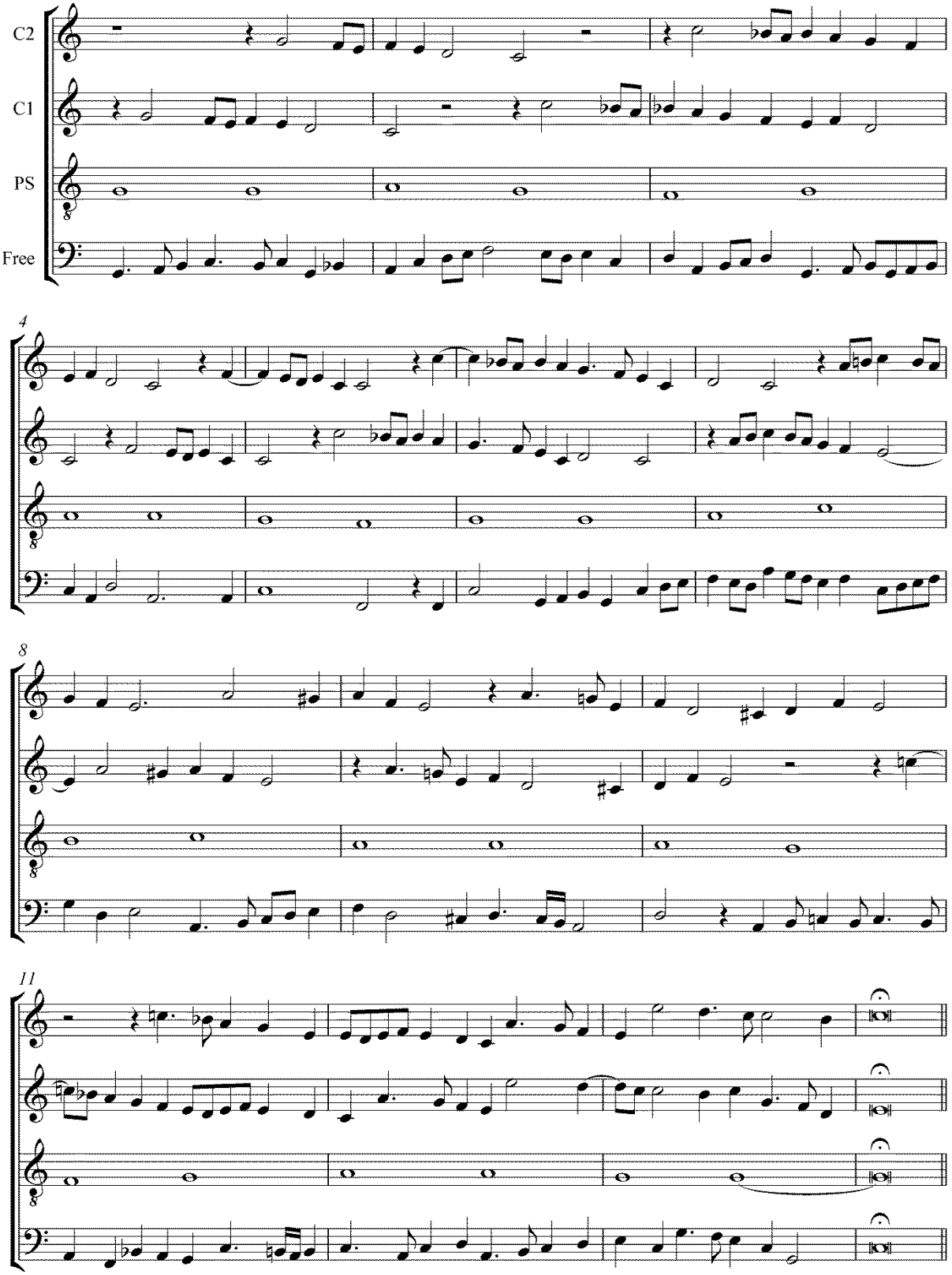
19 All pieces are available in modern transcription in *MB* 14.

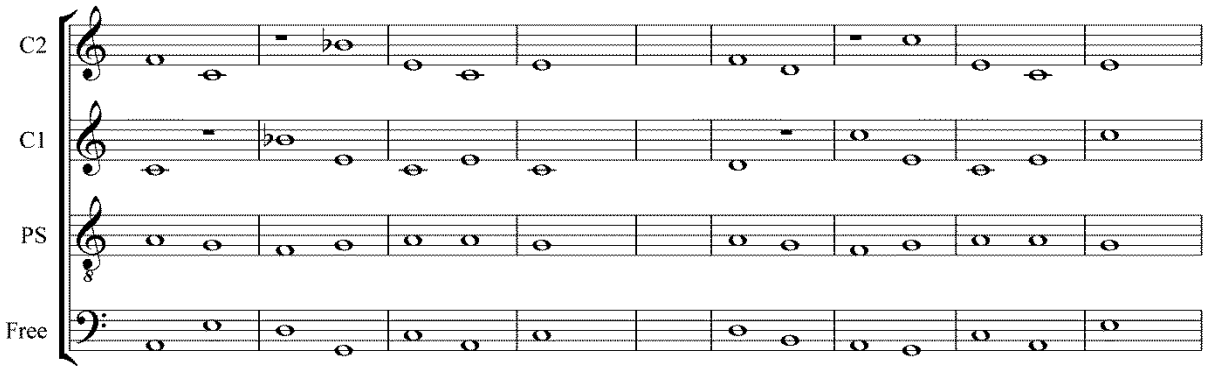
20 Vienna 17.771, f. 81^{v}-81^{r}.

In contrast, Example 3[21] does not exploit the repeated passages within the plainsong melody, instead focusing on the symmetrical properties of the plainsong at its midpoint: note B at bar 8 is flanked on both sides by the notes C and A. Bull emphasizes this attribute by motivic correspondences in the canonic parts: C1 and C4 exchange material so that C1 at bar 6 is taken by C4 an octave higher at bar 10; C4 at bars 7-8 exchanges material with C1 at bars 8-9; the C3 material in bar 7 (over plainsong notes 13-14) becomes C2 material in bar (plainsong notes 17-18); and the C2 material at bars 6-7 (plainsong notes 11-12) become the basis for C3 material in bars 9-10 (plainsong notes 18-19).

21 Vienna 17.771, canon 5, f. 26^{v}-27^{r}, also in RM 24.c.14, numbered canon 42, f. 72^{v}-73^{r}. There are no variants between the sources.



Example 2a: Bull, Canon at the unison after a semibreve with one free part. Vienna Nationalbibliothek Mus. Hs. 17.771, f. 81^{v}-82^{r}.

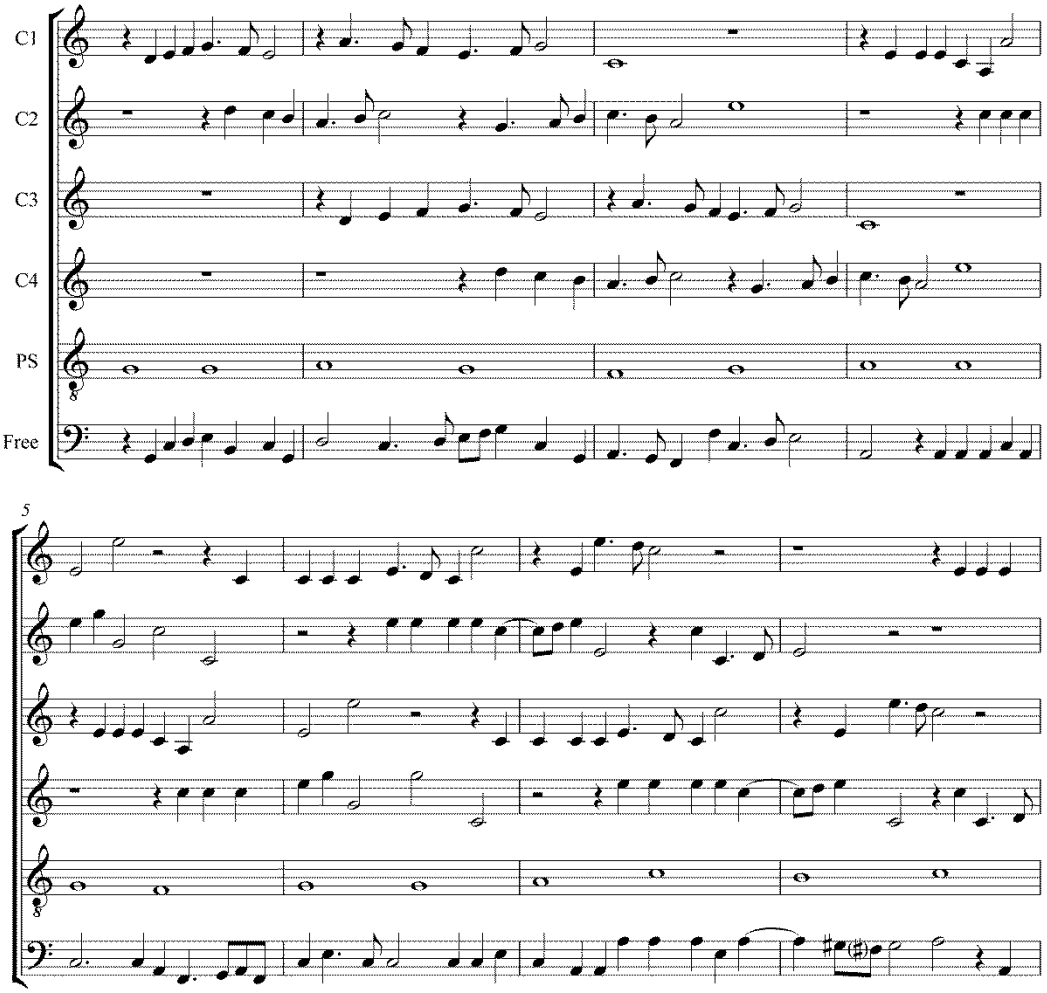


Example 2b: Voice-leading reduction at onsets of plainsong notes 3-9 and 19-25.

This telescoping of material is enabled by imitation in contrary and similar motion. Example 3 is a seemingly ambitious four-part canon in which voice entries alternate between imitation by contrary motion at the octave and imitation in similar motion at the unison. I am not aware of any surviving keyboard plainsongs by Blitheman or other composers of the period that are based entirely on strict manipulations of melodic inversion,[22] but Bull demonstrates how to maintain structural coherence in a very straightforward way: inversion at the octave with D as pivot note means that E will always invert to C and A will invert to G. This canon is mostly built around similarly shaped simple arpeggiations using these notes (apart from the opening idea on D), often with little more than E and C repeated at the same pitch or at the octave above or below, with some assistance from passing and neighbour notes. This limited note range is well suited to forming consonances with the plainsong, itself restricted mostly to the notes G, A and C. The occurrences of the note F at bars 3 and 5 are easily accommodated by the canonic imitation. Bull emphasizes plainsong note B in bar 8 through dissonant intervals (second and ninth) with the parts immediately below and above it. By specifying G# in the bass part, he thereby forms a cadential articulation of A, a sonority otherwise difficult to achieve in setting this plainsong.[23] Throughout the canon, the bass part substantially enriches the texture through participating in the imitative points (bars 4, 8-9, 11, 12) and by filling out the vertical sonorities, notably where there are bare fourths or six-four intervallic combinations amongst the upper parts or where the texture thins out between canonic phrases, especially in the first half of the piece.

22 Harley (1994, 48) notes how use of inversion in Bull's In Nomines "is often no more than impressionistic."

23 The parentheses at F# in the bass in bar 8 indicate my editorial suggestion.

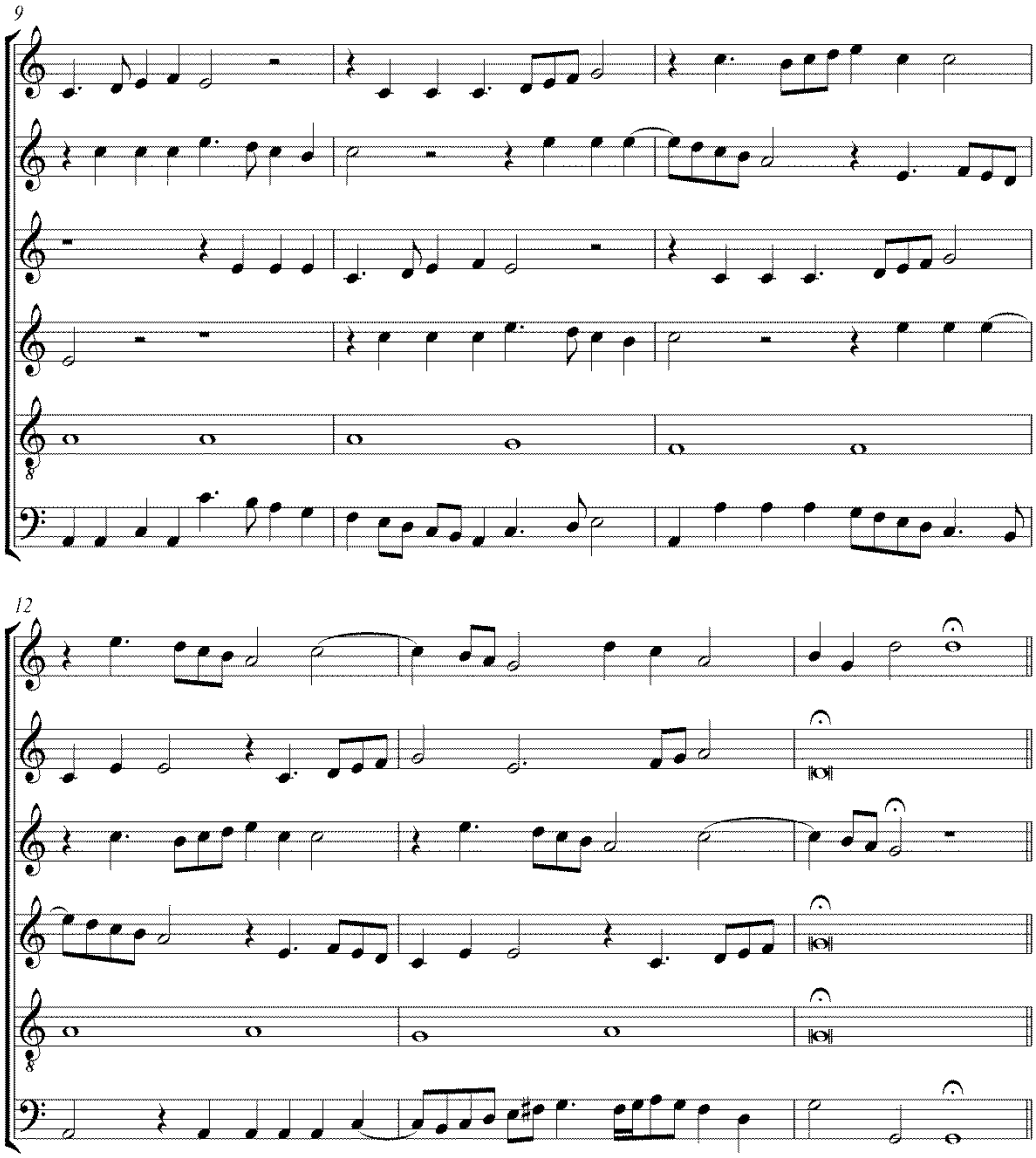


Example 3: Bull, four-part canon on the *Miserere* plainsong at the octave in contrary motion and at the unison in similar motion. Vienna Nationalbibliothek Mus. Hs. 17.771, f. 26^{v}-27^{r}, and British Library RM 24.c.14, f. 72^{v}-73^{r}.

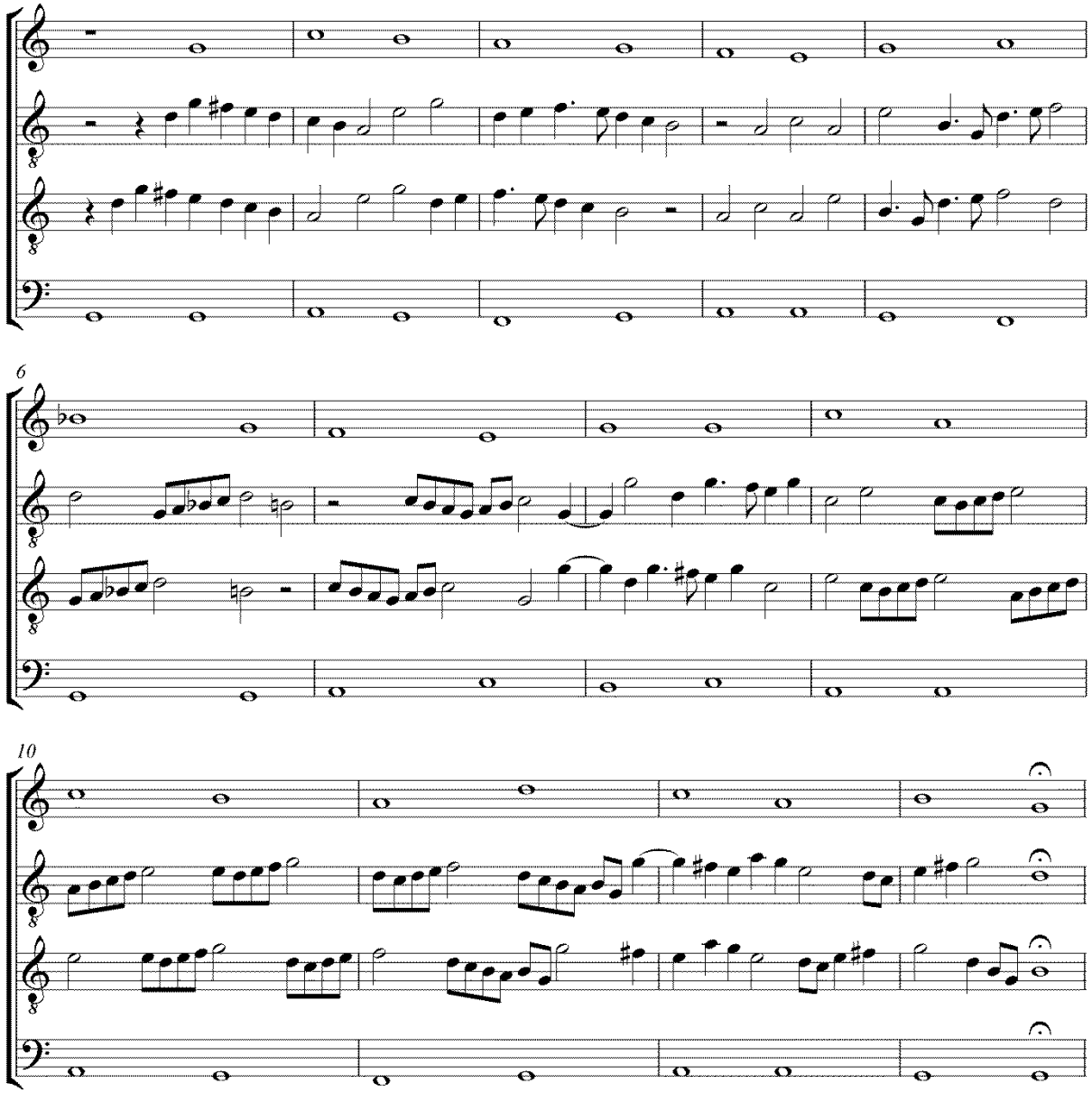
Example 4 demonstrates contrapuntal expertise of an even more cerebral nature.[24] The two middle parts are in imitation at the unison while the fourth part is derived by taking the crotchets and dotted crotchets of the opening canonic part and augmenting them to semibreves a fourth above. Intellectual playfulness

24 Vienna 17.771, canon 82, f. 103^{v}-104^{r}, also in RM 24.c.14, canon 50, f. 34^{v}-35^{r}. The transcription reflects the British Library manuscript version where minor variants involve adjustments to quaver figurations in bars 6 and 12. Dart commented that Bevin, as likely copyist of this manuscript, may have occasionally smoothed out some of Bull's passagework (although the leap from dissonant G in the penultimate bar remains).

is suggested by the derived plainsong melody (C3) catching up with its leader (C1) at bar 8 and moving ahead of it until the final bar. Notwithstanding these compositional constraints, a comparison of the chordal sonorities at the onsets of plainsong notes 3-9 and notes 19-25 shows a remarkable degree of consistency despite the strong thematic contrast between these sections.



Example 3 continued.



Example 4: Bull, three-part canon over the *Miserere* plainsong: two parts at the unison, top part derived in semibreves from crotchets and dotted crotchets of the first canonic voice. Vienna Nationalbibliothek Mus. Hs. 17.771, f. 103^{v}-104^{r}, and British Library RM 24.c.14, f. 34^{v}-35^{r}.

Conclusion

For many reasons, it is unfortunate that Dart's monograph on Bull never reached publication. It would have drawn attention to the significance of canonic writing in Bull's output and may have stimulated study of contrapuntal processes in English music of the period that would have complemented the work of

Kerman. It likewise would have been of relevance to studies of plainsong counterpoint in the training of musicians in these centuries. Detailed investigation of Renaissance imitative processes did not commence until several decades after Dart's death, and recent methodologies provide useful tools for investigating ways in which Bull negotiated the constraints of plainsong-based canonic imitation. While the concept of modular counterpoint is critical to uncovering structural mechanisms in much sixteenth-century music, it does not seem to be pervasive in Bull's canons. In part, this is probably due to the limitations imposed by the melodic motion of the plainsong. The concept of *fuga* is essential to furthering our overall understanding of imitative procedures in the Renaissance, and it provides clarity as to how Bull developed melodic ideas into cohesively unfolding musical textures. Other avenues of enquiry will likely form the bases of future research. These may include methodologies for analyzing specialized contrapuntal procedures such as imitation by contrary motion or augmentation, examples of which abound in the collections of Bull and his contemporaries. An assessment of Bull's compositional choices against contemporary canonic theory, especially the contributions of Thomas Morley and William Bathe would likely yield worthwhile results, with the latter's combinatorial method for composing two-part canons over a plainsong potentially providing insights into organizational principles that must have been observed by all composers of canon. If this is the case, then a comparative study of Bull's canonic writing with the approaches of his contemporaries, especially as represented by the canonic compendia of Bevin and Waterhouse, would enrich our understanding of broad principles underlying Renaissance counterpoint. [25]

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25 An earlier version of this paper was read at the International Conference on British Music, Monash University, Melbourne, September 2010. I am grateful to the following for assistance at different stages of work on this project: Margaret Bent and Christopher Kent for advice on locating Dart's unpublished materials on Bull, Jessie Ann Owens for alerting me to Greg Holt's web site on Dart, Frances Pond at the Records Department of Birmingham City University for making the Dart materials available for my perusal during my visit to the Susi Jeans Archive in 2010, and to John Milsom, Bonnie J. Blackburn and Bronwyn Ellis for comments on earlier drafts of this article. I am grateful to Dr Milsom for making his most recent study of *fuga* (Milsom 2012) available to me in advance of publication.

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